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=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 16:43:28 ON 21 MAR 2003

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FILE COVERS 1907 - 21 Mar 2003 VOL 138 ISS 13

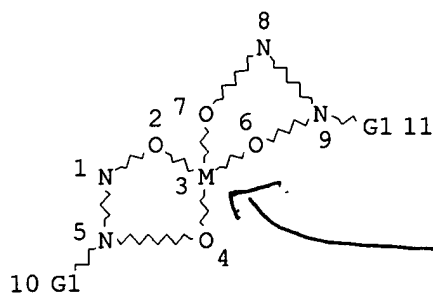
FILE LAST UPDATED: 20 Mar 2003 (20030320/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L5

STR



any metal

326 structures from the query

VAR G1=CB/AK

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L7 326 SEA FILE=REGISTRY SSS FUL L5

L8 315 SEA FILE=HCAPLUS ABB=ON L7

L9 2 SEA FILE=HCAPLUS ABB=ON L8 AND NANOCRYST?

L10 8 SEA FILE=HCAPLUS ABB=ON L8 AND NANO?

L11 8 SEA FILE=HCAPLUS ABB=ON L9 OR L10

8 CA references with nano?

=> D L11 ALL HITSTR 1-8

L11 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 2002:654931 HCAPLUS

DN 137:175453

TI Process for synthesizing non-hydrolytic surfactant capped metal oxide **nanocrystals**

IN Alivisatos, A. Paul; Rockenberger, Joerg

PA The Regents of the University of California, USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C30B007-06

NCL 117068000

CC 66-6 (Surface Chemistry and Colloids)

Section cross-reference(s): 75, 78

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6440213	B1	20020827	US 2000-702219	20001030
PRAI	US 1999-162299P	P	19991028		

AB Disclosed is a process for making surfactant capped **nanocrystals** of transition metal oxides. The process comprises reacting a metal cupferron complex of the formula M Cup, wherein M is a transition metal, and Cup is a cupferron, with a coordinating surfactant, the reaction being conducted at a temp. ranging from about 250 to about 300.degree., for a period of time sufficient to complete the reaction.

applicants

- ST metal oxide **nanocrystal** surfactant capped nonhydrolytic process
- IT **Nanocrystals**
(non-hydrolytic surfactant capped; synthesis of non-hydrolytic surfactant capped metal oxide **nanocrystals** through injection of metal precursor solns. into coordinating surfactant solns.)
- IT Transition metal oxides
RL: SPN (Synthetic preparation); PREP (Preparation)
(surfactant capped **nanocrystal**; synthesis of non-hydrolytic surfactant capped transition metal oxide **nanocrystals** through injection of metal precursor solns. into coordinating surfactant solns.)
- IT 143-27-1, Hexadecylamine 1116-76-3, Trioctylamine
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(coordinating surfactant; synthesis of non-hydrolytic surfactant capped metal oxide **nanocrystals** through injection of metal precursor solns. into coordinating surfactant solns.)
- IT 7440-37-1, Argon, uses
RL: NUU (Other use, unclassified); USES (Uses)
(inert gas; synthesis of non-hydrolytic surfactant capped transition metal oxide **nanocrystals** through injection of metal precursor solns. into coordinating surfactant solns. in atm. of)
- IT **14319-01-8P 15613-15-7P 15613-20-4P**
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(metal precursor; synthesis of metal precursors and prepn. of non-hydrolytic surfactant capped metal oxide **nanocrystals** using them)
- IT 143-27-1DP, Hexadecylamine, metal oxide-bound 1116-76-3DP, Trioctylamine, metal oxide-bound 1309-37-1DP, Iron oxide, amine deriv. complexes 1317-35-7DP, Manganese oxide, amine deriv. complexes 1317-39-1DP, Copper oxide, amine deriv. complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(on surface; synthesis of non-hydrolytic surfactant capped metal oxide **nanocrystals** through injection of metal precursor solns. into coordinating surfactant solns.)
- IT 148-97-0 7447-39-4, Copper chloride, reactions 7705-08-0, Iron chloride (FeCl₃), reactions 7773-01-5, Manganese chloride (MnCl₂)
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; to synthesize metal precursor)

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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- (2) Chemseddine, A; Ber Bunsenges Phys Chem 1993, V97(4), P636 HCAPLUS
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- (6) Matijevic, E; Chem Mater 1993, V5, P412 HCAPLUS
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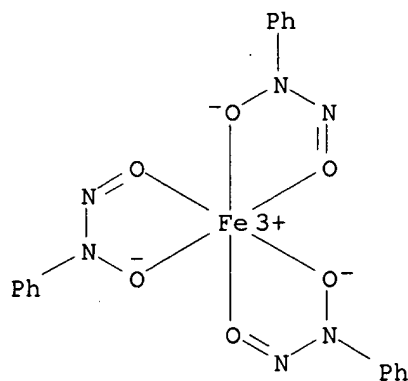
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IT 14319-01-8P 15613-15-7P 15613-20-4P

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (metal precursor; synthesis of metal precursors and prepn. of non-hydrolytic surfactant capped metal oxide **nanocrystals** using them)

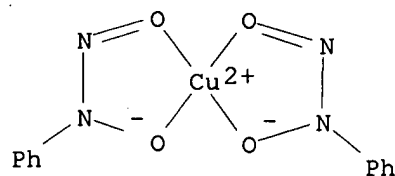
RN 14319-01-8 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI) (CA INDEX NAME)



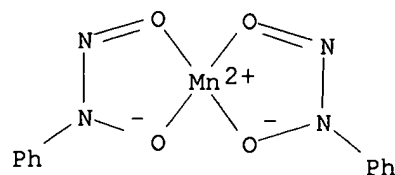
RN 15613-15-7 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI) (CA INDEX NAME)



RN 15613-20-4 HCAPLUS

CN Manganese, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI) (CA INDEX NAME)



L11 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:35464 HCAPLUS
DN 136:256132
TI A solvothermal route to capped **nanoparticles** of γ -Fe₂O₃
and CoFe₂O₄
AU Thimmaiah, Srinivasa; Rajamathi, Michael; Singh, Nikhil; Bera,
Parthasarathi; Meldrum, Fiona; Chandrasekhar, N.; Seshadri, Ram
CS Solid State and Structural Chemistry Unit, Indian Institute of Science,
Bangalore, 560 012, India
SO Journal of Materials Chemistry (2001), 11(12), 3215-3221
CODEN: JMACEP; ISSN: 0959-9428
PB Royal Society of Chemistry
DT Journal
LA English
CC 78-2 (Inorganic Chemicals and Reactions)
Section cross-reference(s): 77
AB The decompn. of single or multiple transition metal cupferron complexes in
org. solvents under solvothermal conditions and in the presence of long
chain amines yields the corresponding oxide **nanoparticles**. The
examples presented here are maghemite γ -Fe₂O₃ **nanoparticles**
from an FeIII-cupferron complex and spinel CoFe₂O₄ **nanoparticles**
starting from CoII-cupferron complex and FeIII-cupferron complex taken in
suitable proportions. The **nanoparticles** are capped with
n-octylamine or n-dodecylamine. The presence of amine in the reaction is
essential for the formation of the product. The magnetic behavior of
pressed pellets of these **nanoparticles** is presented.
ST cobalt iron oxide **nanoparticle** prepn amine capped; cupferron
cobalt iron complex prepn thermal decompn; magnetization cobalt iron oxide
amine capped
IT Magnetization
(of cobalt iron oxide and iron oxide **nanoparticles** capped
with amine)
IT **Nanoparticles**
(prepn. of cobalt iron oxide and ferric oxide **nanoparticles**
capped with amines)
IT Paramagnetism
(superparamagnetism; of iron oxide **nanoparticles** capped with
amine)
IT 14319-01-8P 15613-10-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and thermal decompn. in prepn. of cobalt iron oxide and ferric
oxide **nanoparticles** capped with amines)
IT 404567-06-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. from thermal decompn. of cobalt/iron cupferron complexes and
magnetization of **nanoparticles**)
IT 404567-05-1P 404567-07-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. from thermal decompn. of iron cupferron complexes and
magnetization of **nanoparticles**)
IT 135-20-6, Cupferron
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for prepn. of cobalt and iron cupferron complexes)
IT 111-86-4, n-Octylamine 124-22-1, n-Dodecylamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for prepn. of cobalt iron oxide and ferric oxide

nanoparticles capped with amines)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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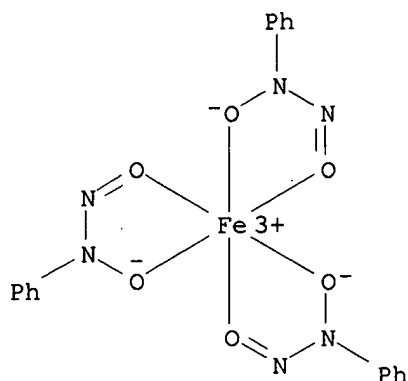
IT 14319-01-8P 15613-10-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

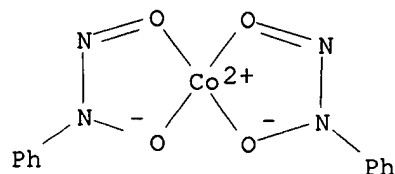
(prepn. and thermal decompn. in prepn. of cobalt iron oxide and ferric oxide **nanoparticles** capped with amines)

RN 14319-01-8 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)



RN 15613-10-2 HCAPLUS

CN Cobalt, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)

L11 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:187823 HCAPLUS

DN 132:315123

TI Vibrational behavior of transition metal cupferronato complexes. Raman and SERS studies on nickel(II) cupferronato complexes

AU Pavel, I.; Cinta, S.; Venter, M.; Deak, A.; Haiduc, I.; Rosch, P.; Cozar, O.; Iliescu, T.; Kiefer, W.

CS Physics Department, Babes-Bolyai University, Cluj-Napoca, 3400, Rom.

SO Vibrational Spectroscopy (2000), 23(1), 71-76

CODEN: VISPEK; ISSN: 0924-2031

PB Elsevier Science B.V.

DT Journal

LA English

CC 73-3 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

AB Raman and surface enhanced Raman scattering (SERS) spectra of the cupferron [PhN2O2]NH4 and new NiL2An complexes, with L = PhN2O2-, n = 1, A=o-phenanthroline, o,o'-bipyridine and n = 2, A=H2O, o-NH2Py, o-C6H4(NH2)2 were recorded and discussed. Vibrational anal. of the neutral ligand and newly prepd. Ni(II) cupferronato complexes suggests electron delocalization through the coordinated N-nitroso-N-hydroxylaminato (ONNO) unit and the bidentate coordination of the anionic ligand to the metal center through the O atoms. A Raman band of the new Ni(II) complexes was found at .apprx.1300 cm-1. The NiL2An, complexes with n = 1, A=o-phenanthroline, o,o'-bipyridine and n = 2, A=H2O adsorb on different Ag SERS substrates. The best SERS spectra were recorded on the **nanometer** Ag colloid particles. The SERS bands assocd. to the chem. interaction between the ONNO unit and Ag colloidal particles were

obsd. o-Phenanthroline and o,o'-bipyridine ring vibrational modes were assigned in the SERS spectra of the corresponding complexes. SERS spectra of the title compds. bring addnl. arguments for the bidentate coordination of the ONNO group.

ST vibrational behavior transition metal cupferronato complex; Raman SERS nickel cupferronato complex

IT Bending vibration
Electron delocalization
Molecular vibration
Raman spectra
SERS (Raman scattering)
Stretching vibration
Vibrational frequency

(vibrational behavior of transition metal cupferronato complexes and Raman and SERS studies on nickel(II) cupferronato complexes)

IT 7440-22-4, Silver, uses

RL: NUU (Other use, unclassified); USES (Uses)

(sol, in electrode; vibrational behavior of transition metal cupferronato complexes and Raman and SERS studies on nickel(II) cupferronato complexes)

IT 135-20-6, Cupferron 135-20-6D, Cupferron, complexes with nickel and aminopyridine 504-29-0D, 2-Aminopyridine, complexes with nickel and cupferron 7440-02-0D, Nickel, complexes with cupferron and aminopyridine, properties 265990-17-8 265990-18-9

265990-19-0 265990-20-3

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(vibrational behavior of transition metal cupferronato complexes and Raman and SERS studies on nickel(II) cupferronato complexes)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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IT 265990-17-8 265990-18-9 265990-19-0

265990-20-3

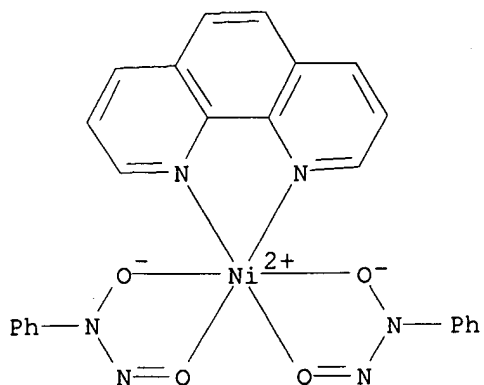
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)

(vibrational behavior of transition metal cupferronato complexes and Raman and SERS studies on nickel(II) cupferronato complexes)

RN 265990-17-8 HCAPLUS

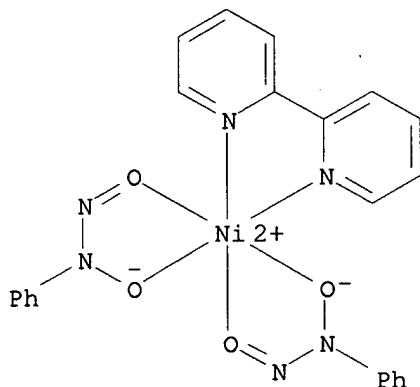
CN Nickel, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato] (1,10-

phenanthroline-.kappa.N1,.kappa.N10)- (9CI) (CA INDEX NAME)



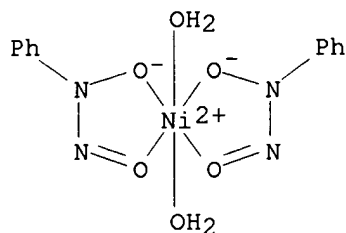
RN 265990-18-9 HCAPLUS

CN Nickel, (2,2'-bipyridine-.kappa.N1,.kappa.N1')bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI) (CA INDEX NAME)



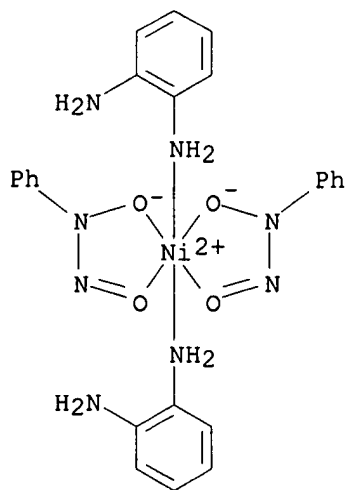
RN 265990-19-0 HCAPLUS

CN Nickel, diaquabis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI) (CA INDEX NAME)



RN 265990-20-3 HCAPLUS

CN Nickel, bis(1,2-benzenediamine-.kappa.N)bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI) (CA INDEX NAME)



IL 3/24/03
 L11 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 1999:757942 HCAPLUS

DN 132:115316

TI A New Nonhydrolytic Single-Precursor Approach to Surfactant-Capped **Nanocrystals** of Transition Metal Oxides

AU Rockenberger, Joerg; Scher, Erik C.; Alivisatos, A. Paul

CS Department of Chemistry, University of California, Berkeley, CA, 94720, USA

SO Journal of the American Chemical Society (1999), 121(49), 11595-11596
 CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

CC 75-1 (Crystallography and Liquid Crystals)

Section cross-reference(s): 66

AB Dispersible **nanocrystals** of transition metal oxides (Fe₂O₃, Mn₃O₄, and Cu₂O) were prep'd. in the absence of water or air by thermal decompn. of metal Cupferron (N-nitrosophenylhydroxylamine) complexes in hot surfactants. Particles with av. sizes down to 4 nm were synthesized by lowering the injection temp. and/or lowering the injected precursor soln. concn. The crystallinity of the particles was revealed by high-resoln. TEM.

ST transition metal oxide **nanocrystal** dispersible prepn surfactant

IT **Nanocrystals**
 Surfactants

(formation of dispersible transition metal oxide **nanocrystals** by thermal decompn. of metal Cupferron complex in hot surfactants)

IT Crystallization

(of dispersible transition metal oxide **nanocrystals** by thermal decompn. of metal Cupferron complex in hot surfactants)

IT Thermal decomposition

(of transition metal Cupferron complexes in hot surfactants in prepn. of dispersible transition metal oxide **nanocrystals**)

IT 143-27-1, Hexadecylamine

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(formation of dispersible copper oxide **nanocrystals** by

- thermal decompn. of metal Cupferron complex in hot surfactant of)
- IT 1116-76-3, Trioctylamine
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(formation of dispersible iron oxide **nanocrystals** by thermal decompn. of metal Cupferron complex in hot surfactant of)
- IT 1317-35-7, Manganese oxide (Mn3O4) 1317-39-1, Cuprous oxide, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(formation of dispersible **nanocrystals** by thermal decompn. of metal Cupferron complex in hot surfactants)
- IT 1309-37-1, Ferric oxide, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(formation of dispersible **nanocrystals** by thermal decompn. of metal Cupferron complex in hot surfactants and characterization)
- IT **15613-15-7P**
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(prepn. and thermal decompn. in hot surfactant in formation of cuprous oxide dispersible **nanocrystals**)
- IT **14319-01-8P**
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(prepn. and thermal decompn. in hot surfactant in formation of ferric oxide dispersible **nanocrystals**)
- IT **15613-20-4P**
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(prepn. and thermal decompn. in hot surfactant in formation of manganese oxide dispersible **nanocrystals**)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Anon; Comprehensive coordination chemistry: the synthesis, reactions, properties, and applications of coordination compounds 1987, V2
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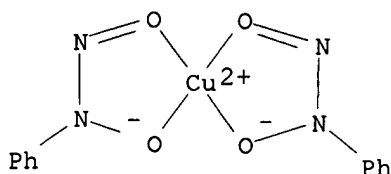
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IT 15613-15-7P

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (prepn. and thermal decompn. in hot surfactant in formation of cuprous oxide dispersible **nanocrystals**)

RN 15613-15-7 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
 (CA INDEX NAME)

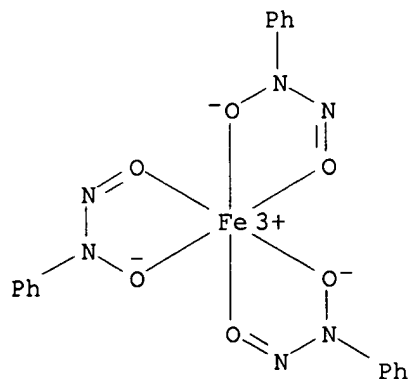


IT 14319-01-8P

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (prepn. and thermal decompn. in hot surfactant in formation of ferric oxide dispersible **nanocrystals**)

RN 14319-01-8 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
 (CA INDEX NAME)



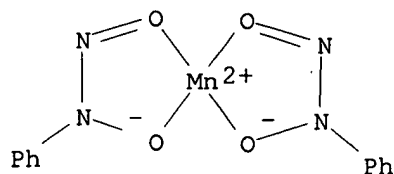
IT 15613-20-4P

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(prepn. and thermal decompn. in hot surfactant in formation of manganese oxide dispersible **nanocrystals**)

RN 15613-20-4 HCAPLUS

CN Manganese, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]-(9CI) (CA INDEX NAME)



L11 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 1974:29066 HCAPLUS

DN 80:29066

TI Prevention of fouling on hydrocarbon separation

IN Raff, Paul; Ritzert, Gerhard; Weitz, Hans M.

PA Badische Anilin- und Soda-Fabrik A.-G.

SO U.S., 4 pp.

CODEN: USXXAM

DT Patent

LA English

IC C07C

NCL 203009000

CC 51-1 (Petroleum, Petroleum Derivatives, and Related Products)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3763018	A	19731002	US 1972-237546	19720323
	DE 2115858	A	19721012	DE 1971-2115858	19710401
	DE 2115858	B2	19770324		
	DE 2115858	C3	19771103		
PRAI	DE 1971-2115858		19710401		
AB	A process for preventing fouling in sepg. mixt. contg. unsatd. hydrocarbons at elevated temp. in presence of antifouling agents is described. Thus, n-methylpyrrolidinone contg. 500 ppm by wt peroxide (calcd. as H ₂ O ₂) is placed in an autoclave and butadiene is added. Salts of N-nitrosocyclohexylhydroxylamine inhibited polymn. better than NaNO₂ at 140.degree..				
ST	nitrosocyclohexylhydroxylamine salt polymn inhibitor; cyclohexylhydroxylamine nitroso salt polymn inhibitor; hydroxylamine cyclohexyl nitroso salt polymn inhibitor; hydrocarbon sepn polymn inhibition				
IT	Polymerization inhibitors (nitrosocyclohexylhydroxylamine salts, for sepn. of unsatd. hydrocarbons)				
IT	Hydrocarbons, preparation RL: PREP (Preparation) (sepn. of unsatd., fouling prevention in, polymn. inhibitors for)				
IT	3710-84-7	7632-00-0	22990-96-1	24830-54-4	26597-17-1 27697-50-3
	40027-76-7	40027-80-3	51279-09-5	51279-10-8	
	RL: USES (Uses) (polymn. inhibitors, for sepn. of unsatd. hydrocarbons)				
IT	40027-76-7 40027-80-3				

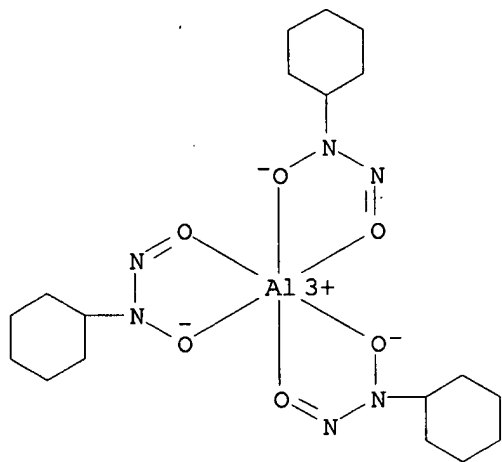
Read this as nano?

RL: USES (Uses)

(polymn. inhibitors, for sepn. of unsatd. hydrocarbons)

RN 40027-76-7 HCAPLUS

RN 40027-80-3 HCAPLUS

CN Aluminum, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)cyclohexanaminato]-
(9CI) (CA INDEX NAME)

L11 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 1966:22996 HCAPLUS

DN 64:22996

OREF 64:4249e

TI Precipitation of metal cupferron complexes from homogeneous solutions. I.
Determination of copper

AU Heyn, Arno H. A.; Dave, Natwar G.

CS Boston Univ., Boston, MA

SO Talanta (1966), 13(1), 27-32

DT Journal

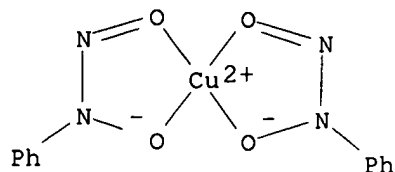
LA English

CC 2 (Analytical Chemistry)

AB The cupferron complex of Cu was pptd. from homogeneous soln. by the addn. of phenylhydroxylamine and NaNO2 to cold, acidic soln. contg. Cu(II) ions. The ppt. can be dried at 90 +/- 5.degree. and weighed without ignition to the oxide. Less than 3 mg. of Cu can be detd. A fairly high concn. of AcOH is tolerable. Sepn. from large quantities of Zn, Ni, and Ag was achieved.IT 7440-50-8, Copper
(analysis, detn., colorimetric)IT 148-97-0, Hydroxylamine, N-nitroso-N-phenyl- 15613-15-7, Copper,
bis(N-nitroso-Nphenylhydroxylaminato)-
(precipitation of, in Cu detn.)IT 15613-15-7, Copper, bis(N-nitroso-Nphenylhydroxylaminato)-
(precipitation of, in Cu detn.)

RN 15613-15-7 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)



L11 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 1965:443817 HCAPLUS

DN 63:43817

OREF 63:7844f-g

TI Separation of cesium-137 from uranium fission products with zinc ferrocyanide

AU Kourim, V.; Million, B.

CS Ceskoslov. Akad. Ved, Prague

SO Collection Czech. Chem. Commun. (1965), 30(8), 2848-50

DT Journal

LA German

CC 12 (Nuclear Phenomena)

AB $\text{Zn}_2\text{Fe}(\text{CN})_6$, obtained by pptg. a 0.1M $\text{Na}_4\text{Fe}(\text{CN})_6$ soln. with a 50% excess of 0.1M $\text{Zn}(\text{NO}_3)_2$, heating the ppt. 2 hrs. on a water bath, filtering, washing the ppt. with 0.3M NaNO_3 soln., drying at 110.degree., grinding and sieving to particle size 0.1-0.5 mm., is a selective sorbent for Cs, with which it yields stable $\text{Cs}_2\text{ZnFe}(\text{CN})_6$. The sorption of Sr, Ru, and Ce is very low, and that of Zr can be suppressed by raising the acidity. Cs is adsorbed on a column from 0.3M NaNO_3 medium and the partly retained Zr and Ce are eluted with 0.6M HNO_3 . Cs is eluted in the last fractions with 6M HNO_3 or 6M NH_4NO_3 and contains <5% radioactive contaminants, of which approx. 3% is ^{95}Zr .

IT Ferrates(II), hexacyano-
Zirconium compounds, (N-nitroso-N-phenylhydroxylaminato)zirconium(IV) ion
Zirconium compounds, bis(N-nitroso-N-phenylhydroxylaminato)zirconium(IV) ion

Zirconium compounds, tris(N-nitroso-N-phenylhydroxylaminato)zirconium(IV) ion

IT 14883-27-3, Cesium zinc hexacyanoferrate(II), $\text{Cs}_2\text{Zn}[\text{Fe}(\text{CN})_6]$ 14883-27-3,
Zinc cesium hexacyanoferrate(II), $\text{Cs}_2\text{Zn}[\text{Fe}(\text{CN})_6]$
(cesium-137 sepn. from fission product soln. by pptn. as)

IT 7440-61-1, Uranium
(fission fragments or products of, ^{137}Cs sepn. from, by pptn. as
 $\text{Cs}_2\text{ZnFe}(\text{CN})_6$)

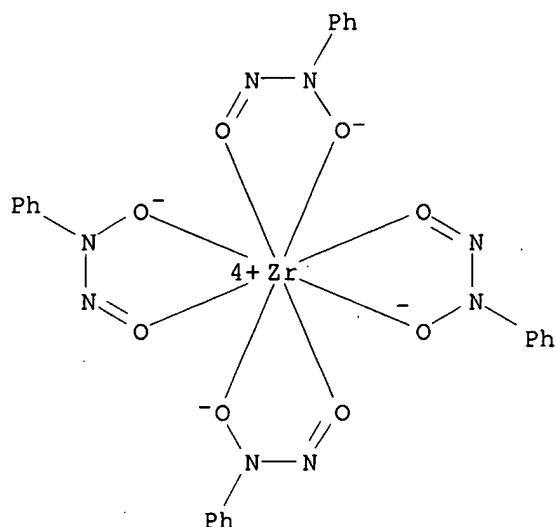
IT 7440-46-2, Cesium
(isotope of mass 137, sepn. from U fission products by pptn. as
 $\text{Cs}_2\text{ZnFe}(\text{CN})_6$)

IT 17594-72-8, Zirconium, tetrakis(N-nitroso-N-phenylhydroxylaminato)-
(prepn. of)

IT 17594-72-8, Zirconium, tetrakis(N-nitroso-N-phenylhydroxylaminato)-
(prepn. of)

RN 17594-72-8 HCAPLUS

CN Zirconium, tetrakis(N-hydroxy-N-nitrosobenzenaminato-O,O')- (9CI) (CA
INDEX NAME)



L11 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2003 ACS

AN 1960:16652 HCAPLUS

DN 54:16652

OREF 54:3270h-i,3271a-b

TI N-Nitroso-N-alkyl- and N-nitroso-N-cycloalkylhydroxylamines

PA Badische Anilin- & Soda-Fabrik Akt.-Ges.

DT Patent

LA Unavailable

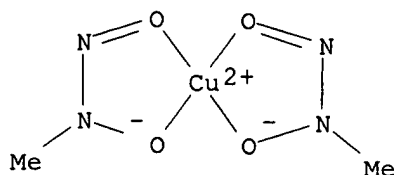
CC 10D (Organic Chemistry: Alicyclic Compounds)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 815537		19590624	GB	
AB	<p>N-Cyclohexylhydroxylamine (I) 115 was treated with <u>NaNO₂</u> (II) 69 in 2N HCl 600 parts at a rate such that II was consumed as it was added (the temp. held at -5 to 5.degree.) the ppt. filtered off, washed with ice H₂O, and dried to give 90% N-nitroso deriv. (III), m. 42-3.degree.. The following salts of III were prepd. (salt, m.p. and % yield from I given): NH₄, 130.degree.. 88; MeNH₂, 145.degree., 86; cyclohexylamine (IV), 165.degree., 80, and dicyclohexylamine (V), 144.degree., 82. The NH₄ salt 161 was dissolved in H₂O, treated with a soln. of NiNO₃.6H₂O 150 parts, the ppt. filtered off and dried to yield 85% green Ni complex of III, m. 116.degree. (hot H₂O). Similarly were prepd. the following metal complexes of III (metal, color, and m.p. given): Cu(II) (VI), violet, 159.degree.; Zn, colorless, 102.degree.; Ca, colorless, 273.degree.; Ba, colorless, 290.degree.; Sr, colorless, 310.degree.; Al, colorless, 95.degree.; Ag, colorless, 114.degree.; Pb(II), yellowish, 167.degree.; Mn(II), green, 200.degree.; V(V), green, -; Ce(III), yellow, 128.degree.; HgCl(I), colorless, 137.degree.; Be, colorless, 280.degree.; Mg, colorless, 304.degree.; Co(II), rose, 106.degree.; and U(VI), yellow, 195.degree.. VI could also be prepd. by the addn. of an aq. soln. of CuSO₄ 125 to I 115 in 2N HCl followed by a soln. of II 69 parts at 0.degree. with stirring. The violet ppt. of VI was filtered off with suction, washed with H₂O and dried. Yield 95%. By similar procedures were prepd. the following N-nitrosohydroxylamines, salts, and metal complexes (m.p. given): N-cyclooctyl, NH₄ salt, 135.degree., IV salt,</p>				

156.degree., Zn complex, 99.degree., Cu complex, violet solid,
 118.degree.; N-iso-Pr, Cu complex, violet solid, 133.degree., IV salt,
 137.degree.; V salt, 131.degree.; N-Bu, Cu complex, dark violet,
 133.degree.; N-cycloheptyl, NH4 salt, 130.degree., Cu complex, violet
 ppt., 146.degree.; N-Me, IV salt, 136.degree., Cu complex, violet ppt.,
 198.degree.; N-(1-hydroxymethyl)cyclohexyl, Cu complex, violet ppt.,
 156.degree., and N-(1-cyano)cyclohexyl, 50.degree. (decompn.), NH4 salt,
 149.degree., IV salt, 146.degree. (decompn.), Cu complex, violet ppt.,
 151.degree. (decompn.).

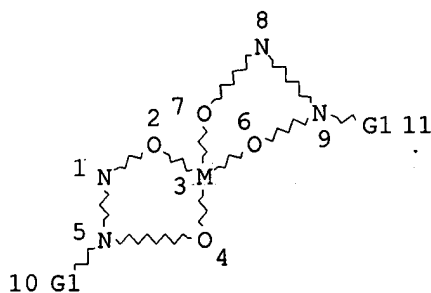
- IT Aluminum, compound with N-cyclohexyl-N-nitrosohydroxylamine
 Barium, compd. with N-cyclohexyl-N-nitrosohydroxylamine
 Beryllium compounds, with N-cyclohexyl-N-nitrosohydroxylamine
 Calcium, compd. with N-cyclohexyl-N-nitrosohydroxylamine
 Cerium compounds, with N-cyclohexyl-N-nitrosohydroxylamine
 Cobalt, compound with N-cyclohexyl-N-nitrosohydroxylamine
 Copper, compounds, with N-nitrosohydroxylamines
 Cyclohexanemethanol, 1-(hydroxynitrosamino)-, copper deriv.
 Hydroxylamine, N-[1-(hydroxymethyl)cyclohexyl]-N-nitroso-, copper deriv.
 Hydroxylamine, N-butyl-N-nitroso-, copper deriv.
 Lead, compound with N-cyclohexyl-N-nitrosohydroxylamine
 Magnesium, cyclohexyl-, chloride, compd. with N-cyclohexyl-N-
 nitrosohydroxylamine
 Manganese, compound with N-cyclohexyl-N-nitrosohydroxylamine
 Mercury, compd. with N-cyclohexyl-N-nitrosohydroxylamine
 Methylamine, compd. with N-cyclohexyl-N-nitrosohydroxylamine
 Nickel, compd. with N-cyclohexyl-N-nitrosohydroxylamine
 Silver, compd. with N-cyclohexyl-N-nitrosohydroxylamine
 Strontium, compd. with N-cyclohexyl-N-nitrosohydroxylamine
 IT Hydroxylamine, N-[1-(hydroxymethyl)cyclohexyl]-N-nitroso-
 (and copper deriv.)
 IT Hydroxylamine, N-(1-cyanocyclohexyl)-N-nitroso-
 (and derivs.)
 IT Hydroxylamine, N-nitroso-
 (derivs.)
 IT 69576-89-2, Hydroxylamine, N-butyl-N-nitroso-
 (and copper deriv.)
 IT 4883-72-1, Hydroxylamine, N-cyclohexyl-N-nitroso- **36502-50-8**,
 Hydroxylamine, N-methyl-N-nitroso-, copper deriv. 58102-57-1,
 Cyclohexanecarbonitrile, 1-(hydroxynitrosamino)- 98020-77-0,
 Hydroxylamine, N-isopropyl-N-nitroso- 98428-46-7, Hydroxylamine,
 N-cycloheptyl-N-nitroso- 98998-49-3, Hydroxylamine, N-cyclooctyl-N-
 nitroso-
 (and derivs.)
 IT 101-83-7, Dicyclohexylamine 108-91-8, Cyclohexylamine
 (compds. with N-nitrosohydroxylamines)
 IT 98428-62-7, Cyclohexanemethanol, 1-(hydroxynitrosamino)-
 (prepn. of)
 IT **36502-50-8**, Hydroxylamine, N-methyl-N-nitroso-, copper deriv.
 (and derivs.)
 RN 36502-50-8 HCAPLUS
 CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)methanaminato]- (9CI)
 (CA INDEX NAME)



=> D QUE

L5

STR



VAR G1=CB/AK

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L7 326 SEA FILE=REGISTRY SSS FUL L5
 L8 315 SEA FILE=HCAPLUS ABB=ON L7
 L9 2 SEA FILE=HCAPLUS ABB=ON L8 AND NANOCRYST?
 L10 8 SEA FILE=HCAPLUS ABB=ON L8 AND NANO?
 L11 8 SEA FILE=HCAPLUS ABB=ON L9 OR L10
 L12 71 SEA FILE=REGISTRY ABB=ON L7 AND 1/FE,MN,CU
 L13 98 SEA FILE=HCAPLUS ABB=ON L12
 L14 23 SEA FILE=HCAPLUS ABB=ON L13(L) (PREP OR IMF OR SPN)/RL
 L15 20 SEA FILE=HCAPLUS ABB=ON L14 NOT L11

=> D L15 BIB ABS HITSTR

L15 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1999:101747 HCAPLUS

DN 130:222819

 TI Synthesis and some transformations of N-allyl-N'-methoxy- and
 N-allyl-N'-tosyloxydiazene N-oxides

AU Luk'yanov, A.; Shlykova, N. I.

 CS N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of
 Sciences, Moscow, 117913, Russia

 SO Russian Chemical Bulletin (Translation of Izvestiya Akademii Nauk, Seriya
 Khimicheskaya) (1998), 47(11), 2193-2196

*structures with
these metals
per claims*

*Prep's of Fe, Mn
or Cu structures*

CODEN: RCBUEY; ISSN: 1066-5285

PB Consultants Bureau

DT Journal

LA English

AB The first representatives of N-2-alkenyl-N'-alkoxydiazene N-oxides and N-2-alkenyl-N'-sulfonyloxydiazene N-oxides have been synthesized. Some reactions of the double bond in these compds. have been studied. The possibility of isomerization of N-2-alkenyl-N'-alkoxydiazene N-oxides to N-alk-1-enyl derivs. has been discovered.

IT 110572-30-0P

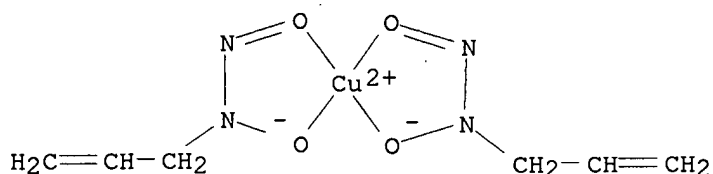
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(prepn. and reactions of N-allyl-N'-methoxy- and N-allyl-N'-tosyloxydiazene N-oxides)

RN 110572-30-0 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)-2-propen-1-aminato]-(9CI) (CA INDEX NAME)



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D L15 BIB ABS HITSTR 2-20

L15 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1998:273720 HCAPLUS

DN 129:4485

TI The reaction of nitroxyl (HNO) with nitrosobenzene gives cupferron (N-nitrosophenylhydroxylamine)

AU Shoeman, Don W.; Nagasawa, Herbert T.

CS Medical Research Laboratories, VA Medical Center, Minneapolis, MN, 55417, USA

SO Nitric Oxide (1998), 2(1), 66-72

CODEN: NIOXF5; ISSN: 1089-8603

PB Academic Press

DT Journal

LA English

AB Nitroxyl (HNO), a penultimate product in the NOS-catalyzed conversion of L-arginine to L-citrulline, generated from Angeli's salt (AS) was detd. by trapping it with nitrosobenzene to produce cupferron. The cupferron thus produced was characterized by complexation with Fe³⁺, Al³⁺, Cu²⁺, or Sn²⁺. UV/VIS spectra of the solubilized (in CHCl₃) ppts. formed from nitrosobenzene and nitroxyl generated from Angeli's salt in the presence of the iron, aluminum, copper, or tin salts were identical to those of their corresponding cupferron complexes. The identities of the Fe³⁺ and Cu²⁺ complexes formed from nitrosobenzene and HNO were further confirmed by their identical retention times on HPLC when compared to authentic Fe³⁺ and Cu²⁺ cupferron complexes. It was possible to detect 5 .times. 10⁻⁶ M of the cupferron Fe³⁺ complex spectrophotometrically and to measure its

prodn. from the nitroxyl generators Angeli's salt and methanesulfohydroxamic acid (MSHA) in the presence of 10-4 M nitrosobenzene. The yield of cupferron was 51% and 62% of the amt. of nitroxyl possible from Angeli's salt or MSHA, resp., after taking into account the relative rates of nitroxyl generation from these donors.

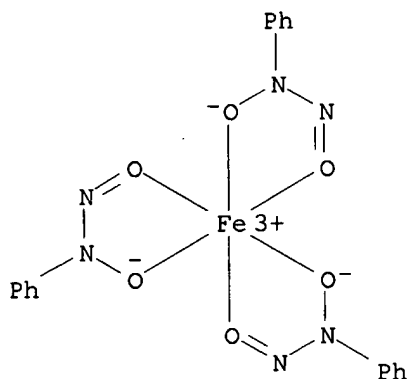
IT 14319-01-8P, Iron cupferronate 15613-15-7P,

Bis(cupferronato)copper

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

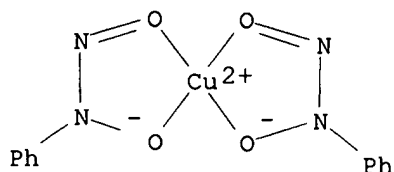
RN 14319-01-8 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)



RN 15613-15-7 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)



RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1998:55730 HCAPLUS

DN 128:115708

TI Method for producing finely divided, water-insoluble polymers of aziridines as well as modified, water-insoluble polymers of aziridines and their use

IN Steuerle, Ulrich; Reuther, Wolfgang; Meixner, Hubert; Ehle, Michael; Greindl, Thomas; Betz, Rainer

PA BASF A.-G., Germany

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19627909	A1	19980115	DE 1996-19627909	19960711
	WO 9802482	A1	19980122	WO 1997-EP3573	19970707

W: JP, US
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

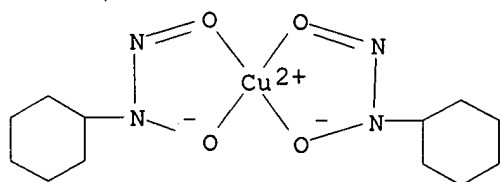
PRAI DE 1996-19627909 19960711

AB Finely divided water-insol. polymers are manufd. by polymn. of aziridines such as ethylenimine in the presence of crosslinkers in ethers. Using ethers as polymn. media facilitates filtering of the polymers in the absence of dispersants. These polymers are modified by reaction with CS₂, HCHO, or a nucleophile such as alkali-metal cyanides, primary amines, secondary amines, alkali-metal sulfites, or alkali-metal phosphites in aq. media. The modified and unmodified polymers are useful for immobilization of active substances, as absorbers for aldehydes, ketones, and acids, for removal of heavy metal ions from wastewater, for removal of O₃ and(or) acid vapors from air or inert gases.

IT **15627-09-5DP**, reaction products with crosslinked polyethylenimine
RL: **IMF (Industrial manufacture); PREP (Preparation)**
(producing finely divided, water-insol. polymers of aziridines and modified, water-insol. polymers of aziridines and their use as absorbers)

RN 15627-09-5 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)cyclohexanaminato]-(9CI) (CA INDEX NAME)



L15 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:733125 HCAPLUS

DN 128:34546

TI Synthesis and structure of di(NON-azoxy)formals and some related N-alkyl-N'-alkoxydiazene N-oxides

AU Zyusin, I. N.; Nechiporenko, G. N.; Golovina, N. I.; Trofimova, R. F.; Loginova, N. V.

CS Russian Academy Sciences, Inst. Chemical Physics Chernogolovka, Moscow, 142432, Russia

SO Russian Chemical Bulletin (Translation of Izvestiya Akademii Nauk, Seriya Khimicheskaya) (1997), 46(8), 1421-1429
CODEN: RCBUEY; ISSN: 1066-5285

PB Consultants Bureau

DT Journal

LA English

AB A series of di(NON-azoxy)formals and some related N-alkyl-N'-alkoxydiazene N-oxides were prepd. by the reaction of N-nitrosohydroxylamine salts with dihaloalkanes. The dependence of the yield of di(methyl-NON-azoxy)formal on the reaction conditions and the nature of the cation was studied. The structure of di(methyl-NON-azoxy)formal and di(phenyl-NON-azoxy)formal as

well as of the copper tert-butylnitrosohydroxylamine was established by x-ray diffraction anal.

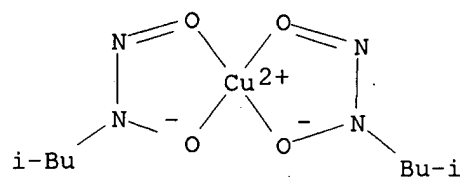
IT 93169-75-6P 123838-25-5P 199739-39-4P
199739-42-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and structure of di(NON-azoxy)formals and some related compds.)

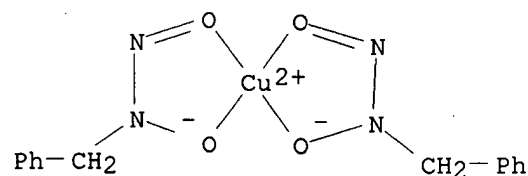
RN 93169-75-6 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-2-methyl-N-(nitroso-.kappa.O)-1-propanaminato]- (9CI) (CA INDEX NAME)



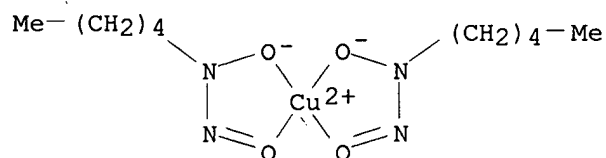
RN 123838-25-5 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenemethanaminato]- (9CI) (CA INDEX NAME)



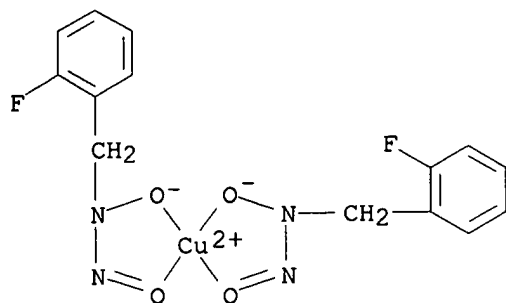
RN 199739-39-4 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)-1-pentanaminato]- (9CI) (CA INDEX NAME)



RN 199739-42-9 HCAPLUS

CN Copper, bis[2-fluoro-N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenemethanaminato]- (9CI) (CA INDEX NAME)



RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1997:195809 HCAPLUS

DN 126:277041

TI On the Mechanism of Allylic Amination Catalyzed by Iron Salts

AU Srivastava, Radhey S.; Nicholas, Kenneth M.

CS Department of Chemistry and Biochemistry, University of Oklahoma, Norman, OK, 73019, USA

SO Journal of the American Chemical Society (1997), 119(14), 3302-3310
CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

AB Iron salts catalyze the allylic amination of alkenes by arylhydroxylamines in moderate to good yields and with high regioselectivity resulting from double-bond transposition. The iron-catalyzed reaction of phenylhydroxylamine with representative alkenes in the presence of 2,3-dimethylbutadiene, an effective PhNO trap, produces allyl amines exclusively, excluding the intermediacy of free PhNO in the amination reaction. The reaction of FeCl₂·3 with PhNO or PhNHOH produces a novel azo dioxide iron complex, {Fe[Ph(O)NN(O)Ph]₃}[FeCl₄]₂ (1a), whose structure has been established by X-ray diffraction. The structure of 1a features essentially tetrahedral Fe(III)Cl₄⁻ anions and a novel six-coordinate dication having iron(II) bound through the oxygens of three azobenzene N,N-dioxide ligands. Evidence that 1a is the active aminating agent in the catalytic reactions includes (1) its isolation from the catalytic reaction; (2) its facile reaction with alkenes to produce allyl amine in high yield and regioselectivity; (3) its amination of alkenes without the intervention of free PhNO; and (4) its efficient catalysis of amination by PhNHOH. The reaction of 2-methyl-2-pentene (2-MP) with 1a (dioxane, 70 °C) was examd. kinetically; the appearance of allylamine was found to be first order in 1a and first order in alkene. Rate consts. detd. for the reactions of 1a with a set of para-substituted .alpha.-methylstyrenes lead to a Hammett .rho. value of -3.0. A small kinetic D-isotope effect, 1.4 ± 0.2, is found for the intermol. amination of .alpha.-(trideuteriomethyl)styrene by 1a. Low-temp. reactions of 1a with 2-MP, .beta.-methylstyrene, and styrene produce isolable alkene adducts. IR, NMR, and UV-vis spectroscopic data also support the formulation of 3a-c as alkene complexes. Evidence that azo dioxide complex 1 transfers a PhNO (rather than PhN) unit to alkene, producing an intermediate allylhydroxylamine which is subsequently reduced to the ultimate allyl amine, is provided from model reaction studies and

GC/MS monitoring. Various mechanistic pathways are presented and analyzed. The mechanism most consistent with all of the accumulated evidence involves alkene coordination to 1 via dechelation of an azo dioxide ligand, intramol. RNO transfer to coordinated alkene to produce the allylhydroxylamine, reductive deoxygenation of the allylhydroxylamine to allylamine, and regeneration of azo dioxide complex 1 by oxidn. of another PhNHOH mol. by iron(III).

IT 188719-40-6P 188719-42-8P 188719-44-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(intermediate adduct; mechanism of allylic amination of .alpha.-methylstyrenes catalyzed by iron salts)

RN 188719-40-6 HCAPLUS

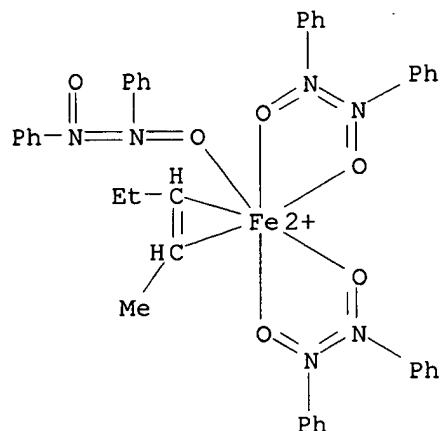
CN Iron(2+), bis[diphenyldiazene 1,2-di(oxide-.kappa.O)][diphenyldiazene 1-(oxide-.kappa.O) 2-oxide][(2,3-.eta.)-2-pentene]-, bis[(T-4)-tetrachloroferrate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 188719-39-3

CMF C41 H40 Fe N6 O6

CCI CCS

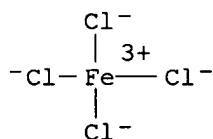


CM 2

CRN 14946-92-0

CMF Cl4 Fe

CCI CCS



RN 188719-42-8 HCAPLUS

CN Iron(2+), bis[diphenyldiazene 1,2-di(oxide-.kappa.O)][diphenyldiazene

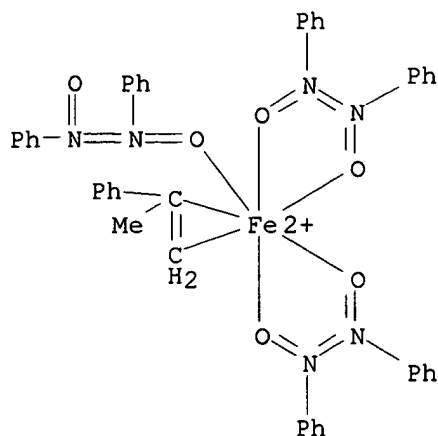
1-(oxide-.kappa.O) 2-oxide][[(1,2-.eta.)-1-methylethenyl]benzene]-,
bis[(T-4)-tetrachloroferrate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 188719-41-7

CMF C45 H40 Fe N6 O6

CCI CCS

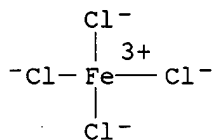


CM 2

CRN 14946-92-0

CMF Cl4 Fe

CCI CCS



RN 188719-44-0 HCAPLUS

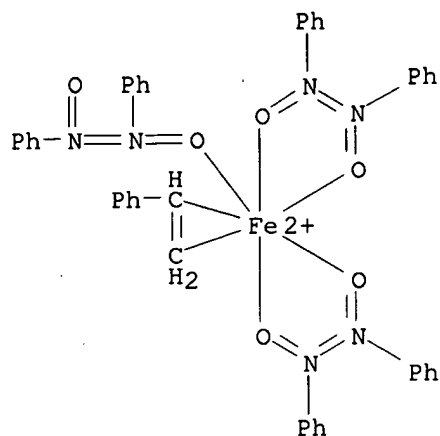
CN Iron(2+), bis[diphenyldiazene 1,2-di(oxide-.kappa.O)][diphenyldiazene
1-(oxide-.kappa.O) 2-oxide][(.eta.2-ethenyl)benzene]-,
bis[(T-4)-tetrachloroferrate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 188719-43-9

CMF C44 H38 Fe N6 O6

CCI CCS

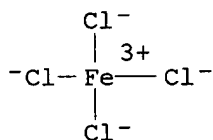


CM 2

CRN 14946-92-0

CMF C14 Fe

CCI CCS



IT 188719-38-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. iron complex; mechanism of allylic amination of alkenes by arylhydroxylamines catalyzed by iron salts)

RN 188719-38-2 HCAPLUS

CN Iron(2+), tris[bis(4-methylphenyl)diazene 1,2-di(oxide-.kappa.O)]-, (OC-6-11)-, (T-4)-tetrachloroferrate(2-) (1:1) (9CI) (CA INDEX NAME)

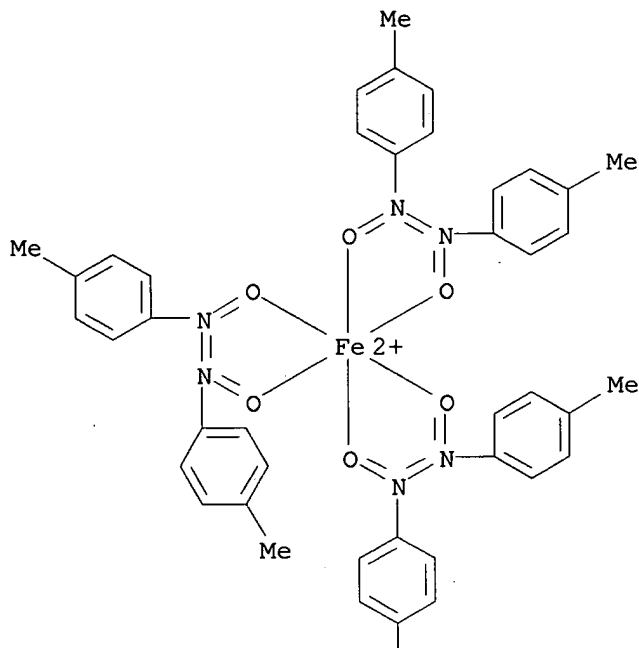
CM 1

CRN 188719-37-1

CMF C42 H42 Fe N6 O6

CCI CCS

PAGE 1-A



PAGE 2-A

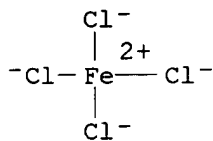


CM 2

CRN 17611-27-7

CMF C14 Fe

CCI CCS



L15 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1996:161720 HCAPLUS

DN 124:305466

TI A Novel Intermediate in Allylic Amination Catalyzed by Iron Salts

AU Srivastava, Radhey S.; Khan, Masood A.; Nicholas, Kenneth M.

CS Department of Chemistry and Biochemistry, University of Oklahoma, Norman, OK, 73019, USA

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

SO Journal of the American Chemical Society (1996), 118(13), 3311-12

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

AB {Fe[Ph(O)NN(O)Ph]3}[FeCl4]2 (1) was isolated from the reactions: (a) FeCl2 + PhNO; (b) FeCl3 + PhNHOH; and (c) PhNHOH + 2-methyl-2-pentene (2-MP) catalyzed by FeCl2. The structure of 1.cntdot.1.5(CH2Cl2), detd. x-ray crystallog., consists of tetrahedral Fe(III)Cl4- anions and a distorted six-coordinate dication having Fe(II) bound through the oxygens of three azobenzene dioxide ligands, the 1st crystallog. established metal complex having a C-nitroso dimer (azo dioxide) ligand. Several expts. strongly implicate nitrosobenzene dimer complex 1 as the active aminating agent in allylic aminations catalyzed by Fe salts including: (a) treatment of 1 with 2-MP in dioxane results in smooth conversion to the corresponding allyl amine (83% yield) with the same distinctive ene reaction-type regioselectivity found in the FeCl2,3-catalyzed aminations; (b) heating 1 with a mixt. of 2-MP and 2,3-dimethylbutadiene (DMB) produced allylic amination products exclusively, as found in the FeCl2,3-catalyzed reactions, ruling out the intermediacy of free PhNO; and (c) 1 was found to catalyze the allylic amination of 2-MP by PhNHOH at a similar rate to FeCl2.

IT 176099-43-7P

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(prepn. and catalytic activity in allylic amination of olefins)

RN 176099-43-7 HCAPLUS

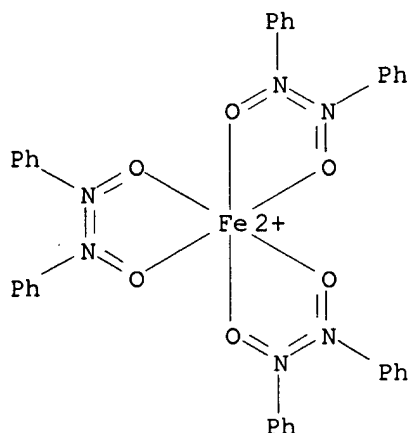
CN Iron(2+), tris[diphenyldiazene 1,2-di(oxide-.kappa.O)]-, (OC-6-11)-, bis[(T-4)-tetrachloroferrate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 176099-42-6

CMF C36 H30 Fe N6 O6

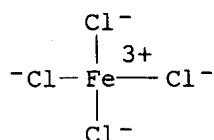
CCI CCS



CM 2

CRN 14946-92-0

CMF C14 Fe
CCI CCS



IT 176099-44-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)

(prepn. and crystal structure of)

RN 176099-44-8 HCAPLUS

CN Iron(2+), tris[diphenyldiazene 1,2-di(oxide-.kappa.O)]-, (OC-6-11)-,
bis[(T-4)-tetrachloroferrate(1-)], compd. with dichloromethane (2:3) (9CI)
(CA INDEX NAME)

CM 1

CRN 75-09-2

CMF C H2 Cl2

Cl-CH₂-Cl

CM 2

CRN 176099-43-7

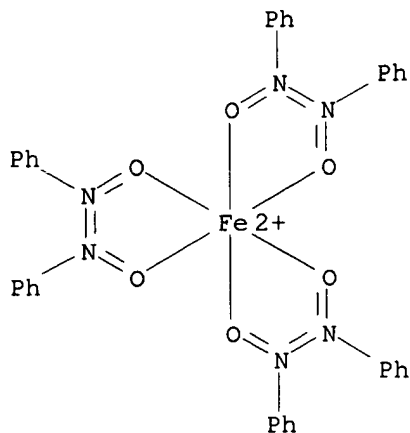
CMF C36 H30 Fe N6 O6 . 2 C14 Fe

CM 3

CRN 176099-42-6

CMF C36 H30 Fe N6 O6

CCI CCS

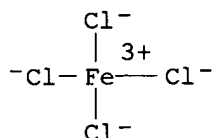


CM 4

CRN 14946-92-0

CMF Cl4 Fe

CCI CCS



L15 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1995:769175 HCAPLUS

DN 123:163273

TI Metal chelate molluscicides: the redistribution of iron diazaalkanolates from the gut lumen of the slug, *Deroceras reticulatum* (Muller) (Pulmonata: Limacidae)

AU Clark, Suzanne J.; Coward, Nicola P.; Dawson, Glenn W.; Henderson, Ian F.; Martin, Andrew P.

CS IACR, Rothamsted, Harpenden, Hertfordshire, AL5 2JQ, UK

SO Pesticide Science (1995), 44(4), 381-8

CODEN: PSSCBG; ISSN: 0031-613X

PB Wiley

DT Journal

LA English

AB Two related iron chelates, one toxic to slugs by ingestion, the other not, were introduced into the foregut of *D. reticulatum*. The subsequent movement and redistribution of the metal within the slug tissues was studied by labeling the chelates with the radioactive isotope ^{55}Fe . In slugs which survived treatment approx. half of the ^{55}Fe was voided in feces. The iron retained became unevenly distributed, the highest concn. occurring in the digestive gland, irresp. of the chelate used. At high doses, slugs treated with tris(1-oxo-1,2-diazabutan-2-oxido)Fe(III) were fatally poisoned while those treated with the homolog, tris(1-oxo-1,2-diazaoctan-2-oxido)Fe(III) were not. Slugs killed by the toxic chelate consistently contained proportionally less iron in the digestive gland and proportionally more in the body wall and reproductive system. Dosing slugs already killed by carbon dioxide asphyxiation gave a similar pattern, suggesting that the greater mobility of the iron from the toxic chelate was not a function of the slugs' metab.

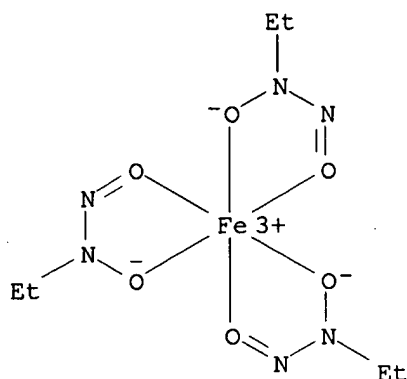
IT 110572-32-2P 167388-33-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **SPN (Synthetic preparation)**; BIOL (Biological study); **PREP (Preparation)**

(iron diazaalkanolates toxicity and metab. in *Deroceras reticulatum*)

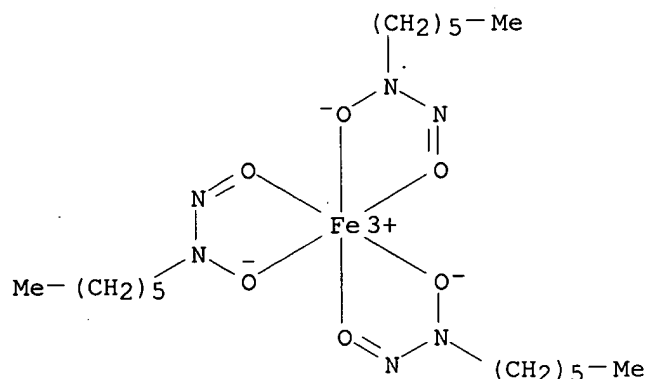
RN 110572-32-2 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)ethanaminato]- (9CI) (CA INDEX NAME)



RN 167388-33-2 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)-1-hexanaminato]-
(9CI) (CA INDEX NAME)



L15 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1989:603019 HCAPLUS

DN 111:203019

TI Copper(2+) complexes containing oxime and thiosemicarbazone-derivatives of
1,2-hydroxylamine ketones

AU Kirichenko, V. N.; Kolesnikova, M. B.; Sheludyakova, L. A.; Larionov, S.
V.; Volodarskii, L. B.

CS Inst. Neorg. Khim., Novosibirsk, USSR

SO Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Khimicheskikh
Nauk (1989), (3), 87-92

CODEN: IZSKAB; ISSN: 0002-3426

DT Journal

LA Russian

AB The coordination compds. of Cu²⁺ with 1,2-hydroxylamine oxime and
thiosemicarbazone were obtained. Their properties were investigated by
means of magnetochem., thermal anal., conductometry and spectroscopy. The
conclusions concerning with the coordination of Cu²⁺ were made. The
nitrosation reaction is characteristic of Cu²⁺ complexes with not only
acyclic but also cyclic 1,2-hydroxylaminooximes.

IT 123495-57-8P

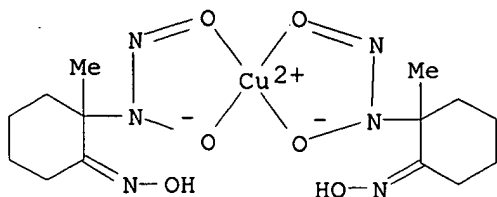
RL: PRP (Properties); FORM (Formation, nonpreparative); PREP

(Preparation)

(formation and properties of)

RN 123495-57-8 HCAPLUS

CN Copper, bis[2-(hydroxynitrosoamino)-2-methylcyclohexanone oximato-O2,O2']-(9CI) (CA INDEX NAME)



L15 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1987:567635 HCAPLUS

DN 107:167635

TI Copper(II) and iron(III) complexes of N-nitroso-N-alkylhydroxylamines, and the x-ray crystal structures of bis(N-nitroso-N-isopropylhydroxylaminato)copper(II) and tris(N-nitroso-N-propylhydroxylaminato)iron(III)

AU Abraham, Michael H.; Bullock, Joseph I.; Garland, John H. N.; Golder, Andrew J.; Harden, Grahame J.; Larkworthy, Leslie F.; Povey, David C.; Riedl, Michael J.; Smith, Gallienus W.

CS Dep. Chem., Univ. Surrey, Guildford, GU2 5XH, UK

SO Polyhedron (1987), 6(6), 1375-81

CODEN: PLYHDE; ISSN: 0277-5387

DT Journal

LA English

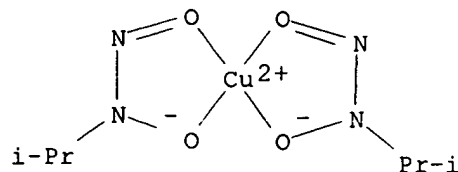
AB N-Nitroso-N-alkylhydroxylamines were prepd. by hydrolysis of the mixt. obtained by reaction of NO with Grignard reagents, and stabilized as their copper(II) or iron(III) complexes, $\text{Cu}(\text{RN2O2})_2$ and $\text{Fe}(\text{RN2O2})_3$, where R is, for example, Me, Et, iso-Pr, iso-Bu, Ph, C_8H_{17} or $\text{C}_{12}\text{H}_{25}$. The complexes were characterized by anal., magnetic and spectroscopic measurements. Single-crystal x-ray methods showed $\text{Cu}(\text{iso-PrN2O2})_2$ to be trans-planar and $\text{Fe}(\text{PrN2O2})_3$ to be a facial octahedral structure; in each complex the N-O bond lengths are equal with the no significant variation between the Cu and Fe complexes.

IT **110572-25-3P**, Bis(N-isopropyl-N-nitrosohydroxylaminato)copper**110572-33-3P**, Tris(N-nitroso-N-propylhydroxylaminato)ironRL: PRP (Properties); **SPN (Synthetic preparation); PREP****(Preparation)**

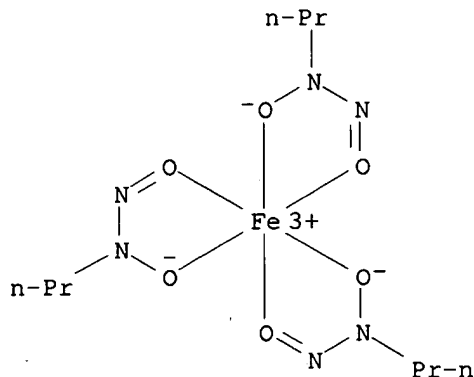
(prepn. and crystal and mol. structure of)

RN 110572-25-3 HCAPLUS

CN Copper, bis(N-hydroxy-N-nitroso-2-propanaminato-O,O')-, (SP-4-1)- (9CI)
(CA INDEX NAME)



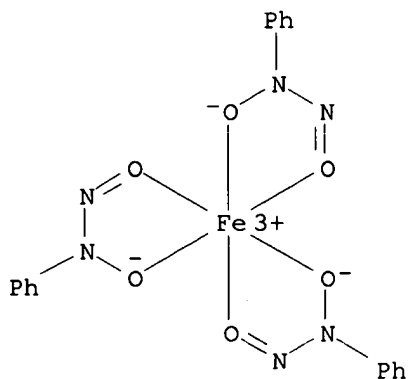
RN 110572-33-3 HCAPLUS

CN Iron, tris(N-hydroxy-N-nitroso-1-propanaminato-O,O')-, (OC-6-22)- (9CI)
(CA INDEX NAME)

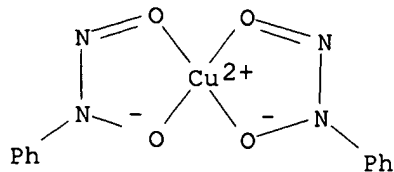
IT 14319-01-8P, Tris(N-nitroso-N-phenylhydroxylaminato) iron
 15613-15-7P, Bis(N-nitroso-N-phenylhydroxylaminato) copper
 36502-50-8P, Bis(N-methyl-N-nitrosohydroxylaminato) copper
 93169-75-6P, Bis(N-isobutyl-N-nitrosohydroxylaminato) copper
 93687-75-3P, Bis(N-ethyl-N-nitrosohydroxylaminato) copper
 98508-41-9P, Bis(N-nitroso-N-tert-butylhydroxylaminato) copper
 110572-26-4P, Bis(N-butyl-N-nitrosohydroxylaminato) copper
 110572-27-5P, Bis(N-nitroso-N-sec-butylhydroxylaminato) copper
 110572-28-6P, Bis(N-nitroso-N-octylhydroxylaminato) copper
 110572-29-7P, Bis(N-dodecyl-N-nitrosohydroxylaminato) copper
 110572-30-0P, Bis(N-allyl-N-nitrosohydroxylaminato) copper
 110572-31-1P, Tris(N-methyl-N-nitrosohydroxylaminato) iron
 110572-32-2P, Tris(N-ethyl-N-nitrosohydroxylaminato) iron
 110572-34-4P, Tris(N-nitroso-N-sec-butylhydroxylaminato) iron
 110572-35-5P, Tris(N-dodecyl-N-nitrosohydroxylaminato) iron

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

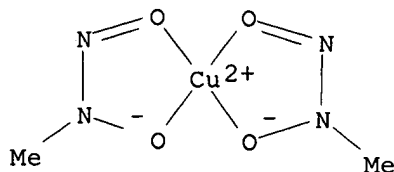
RN 14319-01-8 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)

RN 15613-15-7 HCAPLUS

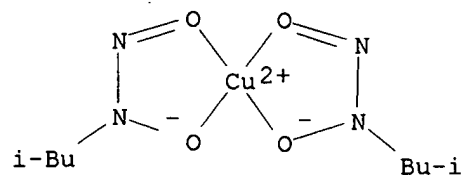
CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)

RN 36502-50-8 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)methanaminato]- (9CI)
(CA INDEX NAME)

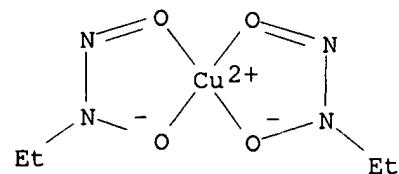
RN 93169-75-6 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-2-methyl-N-(nitroso-.kappa.O)-1-propanaminato]- (9CI) (CA INDEX NAME)



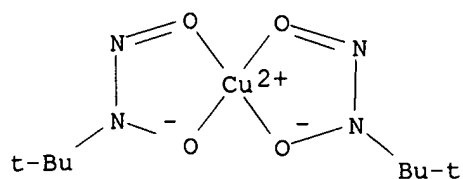
RN 93687-75-3 HCAPLUS

CN Copper, bis(N-hydroxy-N-nitrosoethanaminato-O,O')- (9CI) (CA INDEX NAME)



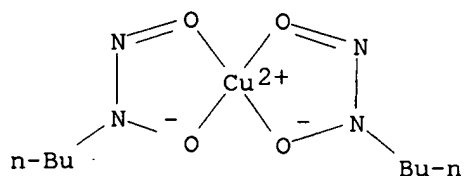
RN 98508-41-9 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-2-methyl-N-(nitroso-.kappa.O)-2-propanaminato]- (9CI) (CA INDEX NAME)



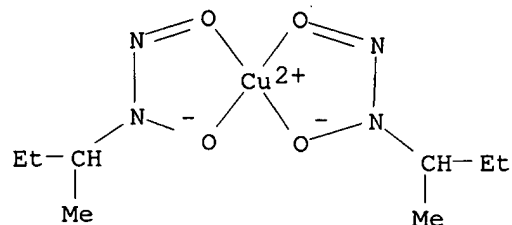
RN 110572-26-4 HCAPLUS

CN Copper, bis(N-hydroxy-N-nitroso-1-butanaminato-O,O')- (9CI) (CA INDEX NAME)



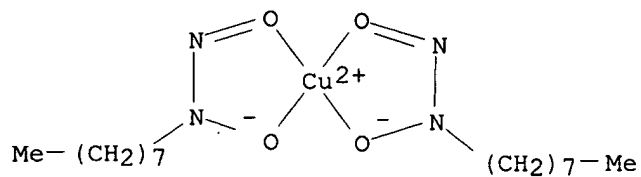
RN 110572-27-5 HCAPLUS

CN Copper, bis(N-hydroxy-N-nitroso-2-butanaminato-O,O')- (9CI) (CA INDEX NAME)



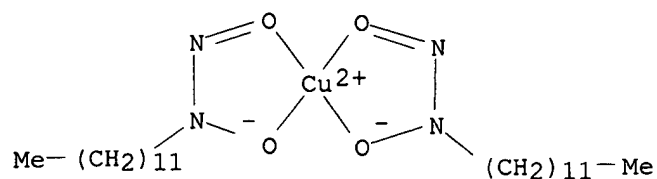
RN 110572-28-6 HCAPLUS

CN Copper, bis(N-hydroxy-N-nitroso-1-octanaminato-O,O')- (9CI) (CA INDEX NAME)

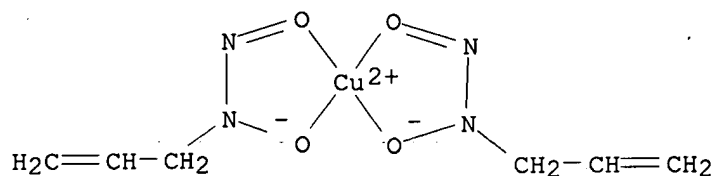


RN 110572-29-7 HCAPLUS

CN Copper, bis(N-hydroxy-N-nitroso-1-dodecanaminato-O,O')- (9CI) (CA INDEX NAME)

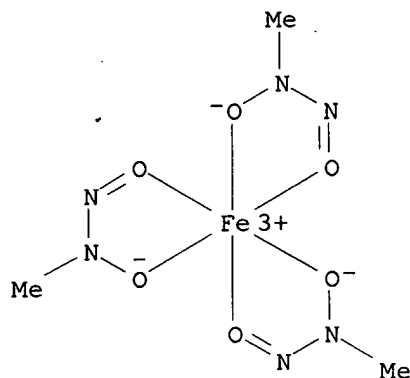


RN 110572-30-0 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)-2-propen-1-aminato]-
(9CI) (CA INDEX NAME)

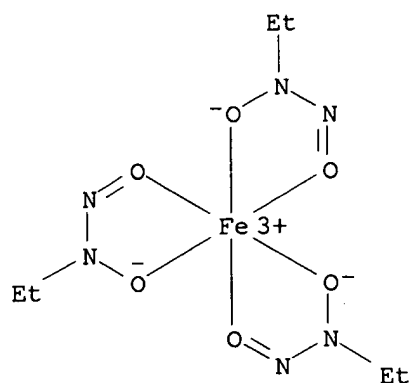
RN 110572-31-1 HCAPLUS

CN Iron, tris(N-hydroxy-N-nitrosomethanaminato-O,O')- (9CI) (CA INDEX NAME)



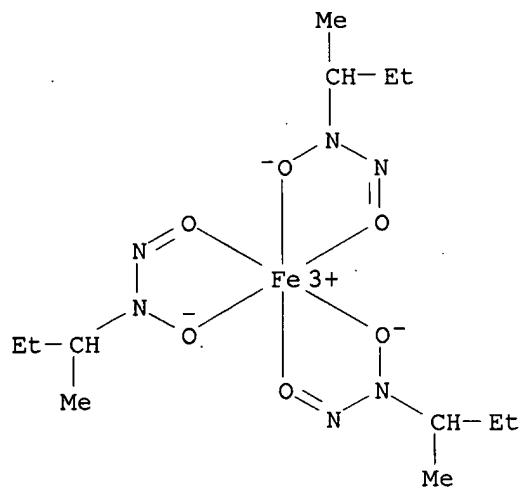
RN 110572-32-2 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)ethanaminato]- (9CI)
(CA INDEX NAME)



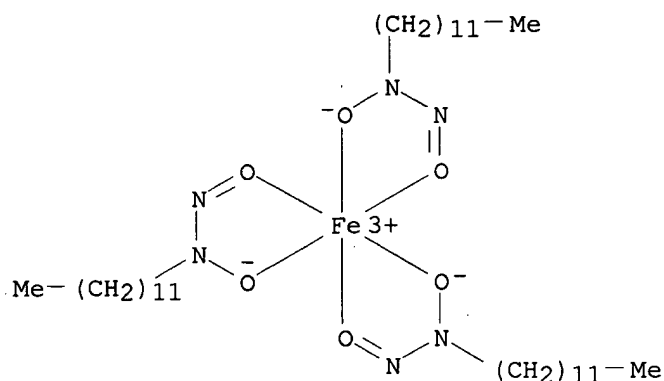
RN 110572-34-4 HCAPLUS

CN Iron, tris(N-hydroxy-N-nitroso-2-butanaminato-O,O')- (9CI) (CA INDEX NAME)



RN 110572-35-5 HCAPLUS

CN Iron, tris(N-hydroxy-N-nitroso-1-dodecanaminato-O,O')- (9CI) (CA INDEX NAME)



L15 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1986:417118 HCAPLUS

DN 105:17118

TI Electronic structure and features of the analytical properties of N-nitroso-N-cyclohexylhydroxylamine and its chelates

AU Kolycheva, N. V.; Petrukhin, O. M.

CS Mosk. Khim.-Tekhnol. Inst., Moscow, USSR

SO Koordinatsionnaya Khimiya (1986), 12(4), 449-62

CODEN: KOKHDC; ISSN: 0132-344X

DT Journal

LA Russian

AB The tautomers of N-nitroso-N-cyclohexylhydroxylamine (HL), the electronic structure of the ligand in MLn ($\text{M} = \text{Cu(II)}, \text{Fe(III)}, \text{La(III)}, \text{Eu(III)}, \text{Yb(III)}, \text{Lu(III)}, \text{Ti(IV)}$), and the kinetics and mechanism of the decompn. of HL in various media were studied by IR, Raman spectra and spectrophotometry. The stability of HL and its analogs, for example cupferron (HL1), toward oxidn., accompanied by cleavage of the N-N bond, is detd. by the ratio of the tautomers, N-nitroso-N'-hydroxylamine and N-hydroxydiimide-N'-oxide (I). The comparison between HL and HL1 indicates the lower the electronegativity of the substituent on the .alpha.-N atom the greater the amt. of I tautomer and stability of the compd. to thermal oxidative decompn. In MLn and MLln chelates the electronic structure of the ligand is changed in relation to the nature of M. Such mobility of the valence electron d. of the ligand, which is stabilized in chelates with a specific mode in relation to the electronic structure of the central atom; is the reason for the nonselectivity of HL and HL1, forming complexes of similar stability with a large no. of different types of metals and possibly for other reagents with groups of chelating properties.

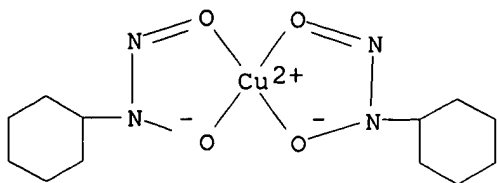
IT 15627-09-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn., vibrational and electronic spectra and electronic structure of)

RN 15627-09-5 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)cyclohexanaminato]- (9CI) (CA INDEX NAME)



L15 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1985:614808 HCAPLUS

DN 103:214808

TI Synthesis and properties of N-alkyl-N'-methoxy-diazenium-N-oxides

AU Zyuzin, I. N.; Lempert, D. B.

CS Inst. Khim. Fiz., Chernogolovka, USSR

SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1985), (4), 831-5

CODEN: IASKA6; ISSN: 0002-3353

DT Journal

LA Russian

OS CASREACT 103:214808

AB RMgX (R = Et, Me₂CH, Me₃C, Me₃CCH₂; X = Cl, Br) reacted with 2 equiv NO in Et₂O at -20 to -10.degree. to give the corresponding ONNROMgX (I) soln. I (R = Et, X = Br; R = Me₂CH, X = Cl) reacted with Me₂SO₄ in MeOH to give 18-19% RN(O):NOMe (II; same R), based on RX. I (R = Me₃C, Me₃CCH₂; X = Cl) reacted with CuSO₄ in aq. H₂SO₄ to give (ONNRO)₂Cu (same R), which gave the K salts (III) with aq.-alc. KOH, and III (same R) reacted with aq. Me₂SO₄ contg. KHCO₃ to give 23-43% II (same R), based on RCl. IR spectra of all 4 II prep'd. and of II (R = Me) indicated bipolar structures and p-pi. conjugation.

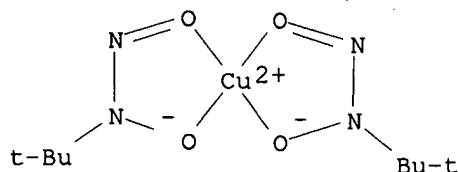
IT 98508-41-9P 98508-42-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and methylation of, alkylmethoxydiazene oxide by)

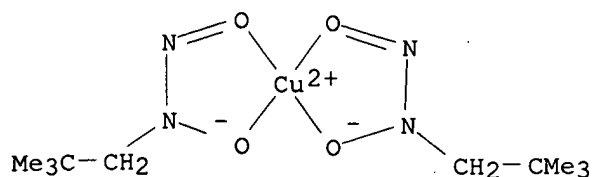
RN 98508-41-9 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-2-methyl-N-(nitroso-.kappa.O)-2-propanaminato]- (9CI) (CA INDEX NAME)



RN 98508-42-0 HCAPLUS

CN Copper, bis(N-hydroxy-2,2-dimethyl-N-nitroso-1-propanaminato)- (9CI) (CA INDEX NAME)



L15 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1985:16422 HCAPLUS

DN 102:16422

TI Synthesis and magnetic and spectral studies of metal complexes of N-nitrosophenylhydroxylamine (cupferron). Reduction of the copper(II) complex by triphenylphosphine and x-ray crystal structure of cupferronatobis(triphenylphosphine)copper(I)

AU Charalambous, John; Haines, L. Ian B.; Harris, Nigel J.; Henrick, Kim; Taylor, F. Brian

CS Sch. Chem., Polytech. North London, London, N7 8DB, UK

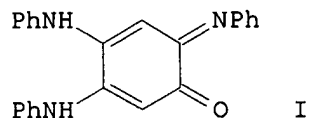
SO Journal of Chemical Research, Synopses (1984), (7), 220-1

CODEN: JRPSDC; ISSN: 0308-2342

DT Journal

LA English

GI



AB Treatment of ML₂ (M = Mn, Co, Fe, Ni, Cu, LH = HONPhNO), prepd. from NH₄L and MSO₄, with pyridine gave monopyridine adducts (M = Co, Cu) or dipyridine adducts (M = Mn, Fe, Ni). CuL₂ with Ph₃P in Me₂CO or pyridine at 20.degree. gave LCu(PPh₃)₂, C₆H₆, PhNH₂, Ph₃PO, and I; kinetics studies showed that the reaction proceeds by 2 concurrent paths. Crystals of CuL(PPh₃)₂ are triclinic, space group P.hivin.1, with a 10.097(4), b 12.955(4), c 14.740(6) .ANG., .alpha. 88.384(3), .beta. 104.438(3), .gamma. 103.332(5).degree., Z = 2, d.(calcd.) = 1.25 g cm⁻³, and R = 0.042 for 4642 reflections.

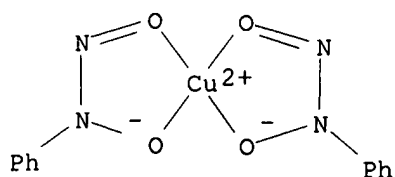
IT 15613-15-7P 15661-73-1P 38780-70-0P

52079-19-3P 93366-17-7P 93393-32-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

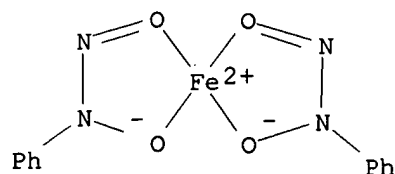
RN 15613-15-7 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)



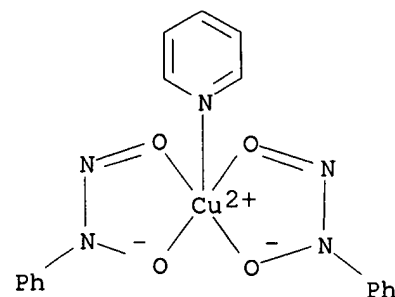
RN 15661-73-1 HCAPLUS

CN Iron, bis(N-hydroxy-N-nitrosobenzenaminato-O,O')-, (T-4)- (9CI) (CA INDEX NAME)



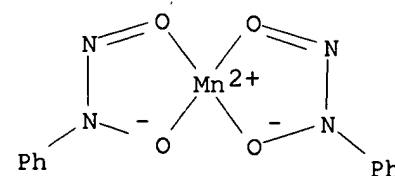
RN 38780-70-0 HCAPLUS

CN Copper, bis(N-hydroxy-N-nitrosobenzenaminato-O,O')(pyridine)- (9CI) (CA INDEX NAME)



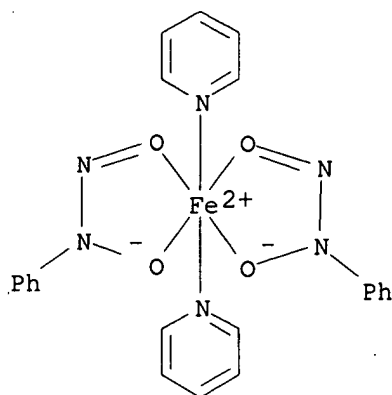
RN 52079-19-3 HCAPLUS

CN Manganese, bis[N-(hydroxy-kappa.O)-N-(nitroso-kappa.O)benzenaminato]-, (T-4)- (9CI) (CA INDEX NAME)

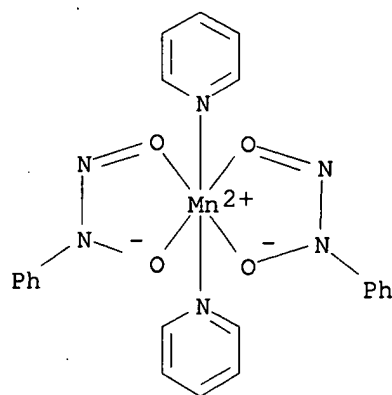


RN 93366-17-7 HCAPLUS

CN Iron, bis(N-hydroxy-N-nitrosobenzenaminato-O,O')bis(pyridine)- (9CI) (CA INDEX NAME)



RN 93393-32-9 HCAPLUS

CN Manganese, bis(N-hydroxy-N-nitrosobenzenaminato-O,O')bis(pyridine)- (9CI)
(CA INDEX NAME)

L15 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1984:502889 HCAPLUS

DN 101:102889

TI Study of products of the reaction of copper(II) with .alpha.-hydroxylaminooxime. Crystal structure of bis[N-(1-hydroxyimino-1-methyl-sec-butyl)nitrosohydroxylamino]copper(II)

AU Shkurpelo, A. I.; Ivanova, G. Yu.; Stetsenko, A. I.; Simonov, Yu. A.; D'yachenko, S. A.; Malinovskii, A. I.

CS Inst. Prikl. Fiz., Kishinev, USSR

SO Koordinatsionnaya Khimiya (1984), 10(6), 794-800
CODEN: KOKHDC; ISSN: 0132-344X

DT Journal

LA Russian

AB CuX₂ (X = Cl, NO₃, OAc, 0.5 SO₄) reacted with RC(:NOH)C(CH₃)₂N(OH)H (R = Me, Ph) to give CuL₂ (HL = RC(:NOH)C(CH₃)₂N(OH)NO). trans-CuL₂ (R = Me) is monoclinic, space group P2₁/b, with a 7.874(3), b 11.031(5), c 18.619(7) .ANG.; .gamma. 78.76(3).degree., Z = 4, d.(calcd.) = 1.62, d.(exptl.) = 1.59 g cm⁻³, R = 0.053. The ligand is coordinated bidentately through the vicinal nitroso and hydroxylamine O atoms. CuL₂

were characterized by IR spectra.

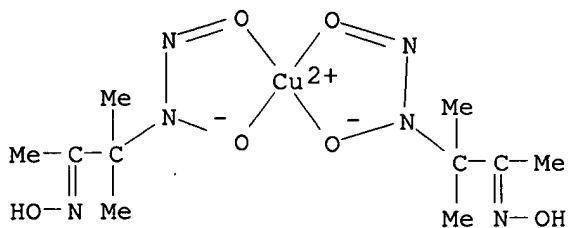
IT 91709-32-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and crystal structure of)

RN 91709-32-9 HCAPLUS

CN Copper, bis[3-(hydroxynitrosoamino)-3-methyl-2-butanone oximato-O3,O3']-, [SP-4-1-(E),(E)]- (9CI) (CA INDEX NAME)

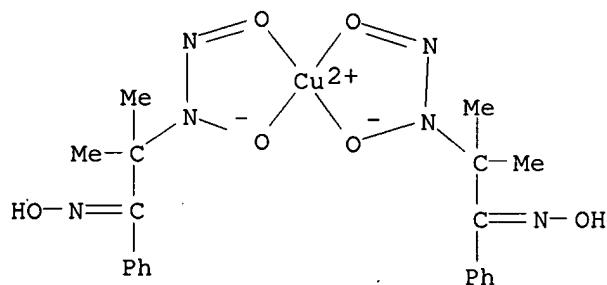


IT 91709-33-0P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

RN 91709-33-0 HCAPLUS

CN Copper, bis[2-(hydroxynitrosoamino)-2-methyl-1-phenyl-1-propanone oximato-O2,O2']-, (SP-4-1)- (9CI) (CA INDEX NAME)



L15 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1981:614311 HCAPLUS

DN 95:214311

TI Further studies on the interaction of nitric oxide with transition metal alkyls

AU Middleton, A. Robert; Wilkinson, Geoffrey

CS Chem. Dep., Imp. Coll. Sci. Technol., London, SW7 2AY, UK

SO Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1981), (9), 1898-905

CODEN: JCDBTBI; ISSN: 0300-9246

DT Journal

LA English

AB The reactions of NO with peralkyl compds. of Zn, Cu, Re, Cr, Mo, W, and Zr and with the phosphine complexes NiLMePPh₃ (L = .eta.5-cyclopentadiene), CoMe₃(PMe₃)₃, and RhMe(PMe₃)₃ was studied. In addn. to the N-alkyl-N-nitrosohydroxylamine complexes generally formed from diamagnetic alkyls and .eta.2 or bridged nitrosoalkanes from paramagnetic

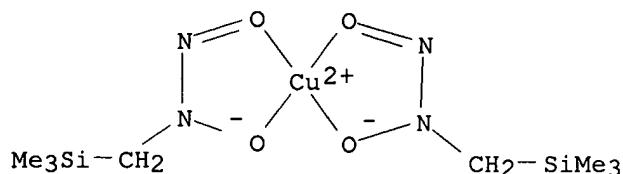
alkyls, complexes with M:O or M-O-M groups were obsd. from the latter or for the interaction of NO with diamagnetic complexes that may give paramagnetic intermediates.

IT 79829-61-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 79829-61-1 HCAPLUS

CN Copper, bis[N-hydroxy-N-nitroso-1-(trimethylsilyl)methanaminato-O,O']-(9CI) (CA INDEX NAME)

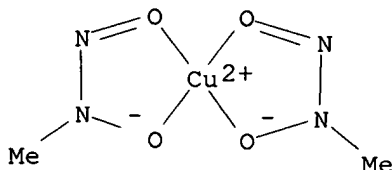


IT 36502-50-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, by reaction of methylcopper(I) with nitric oxide)

RN 36502-50-8 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)methanaminato]- (9CI)
(CA INDEX NAME)



L15 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1979:29846 HCAPLUS

DN 90:29846

TI EPR study of the formation of adducts of copper(II) chelates with organic bases

AU Marov, I. N.; Petrukhin, O. M.; Zhukov, V. V.; Kalinichenko, N. B.

CS USSR

SO Zhurnal Neorganicheskoi Khimii (1978), 23(10), 2702-11

CODEN: ZNOKAQ; ISSN: 0044-457X

DT Journal

LA Russian

AB Formation consts. were detd. for Cu(II) chelate adducts with pyridine, PhNH₂, DMSO, THF, or Ph₃P from -60 to +60.degree. in CHCl₃-PhMe mixts. Complexes form by axial coordination to give CuA₂.B where HA is acetylacetone, dibenzoylmethane, cupferron, thenoyltrifluoroacetone, oxine, diethyldithiocarbamate, or piperidinedithiocarbamate and B is the org. base. Thermodyn. parameters .DELTA.H and .DELTA.S were calcd. Examn. of the present and published data for monoadducts of Cu(O,O)₂ and Cu(N,O)₂ type with O, N, and P donors shows a linear relation for .DELTA.H or .DELTA.S corresponding to an isoequil. temp. of 385 K, while Cu(S,S) type chelates form adducts with (.DELTA.H/.DELTA.S) .apprx. 270 K. The .DELTA.H/.DELTA.S ratio for planar coordination of bases to Zn chelates is

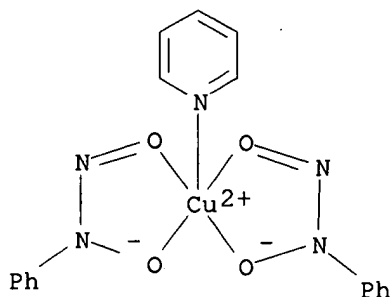
.apprx.620 K.

IT 38780-70-0P 68663-27-4P

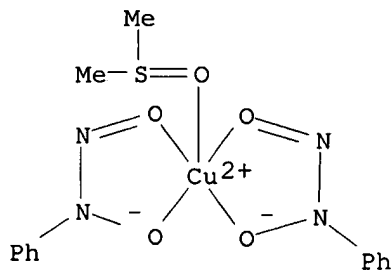
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, ESR in study of)

RN 38780-70-0 HCAPLUS

CN Copper, bis(N-hydroxy-N-nitrosobenzenaminato-O,O') (pyridine)- (9CI) (CA INDEX NAME)



RN 68663-27-4 HCAPLUS

CN Copper, bis(N-hydroxy-N-nitrosobenzenaminato-O,O') [sulfinylbis(methane)-O]-
(9CI) (CA INDEX NAME)

L15 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1973:6870 HCAPLUS

DN 78:6870

TI X-ray diffraction study of phase compounds formed on metal surfaces under
the action of complexing reagents

AU Klyuchnikov, N. G.; Ushenina, V. F.; Barabash, I. A.

CS USSR

SO Fiz. Khim. Poverkh. Yavlenii Vys. Temp. (1971), 258-63. Editor(s):
Eremenko, V. N. Publisher: "Naukova Dumka", Kiev, USSR.

CODEN: 25EVAE

DT Conference

LA Russian

AB The compn. and structure of compds. formed during heterogeneous reaction
of metals with complex (coordination compd. chelate-forming) reagents were
studied by the ionization method for recording x-rays. Fe and cupferron
formed a brown film of Fe cupferronate, insol. in water and aq. acids, but
sol. in org. solvents, with good stability and having some
corrosion-inhibiting effect on Fe in N HCl; Zn and 8-oxyquinoline reacted
to form a cryst., yellow chelate readily sol. in CHCl3; it formed a dense,

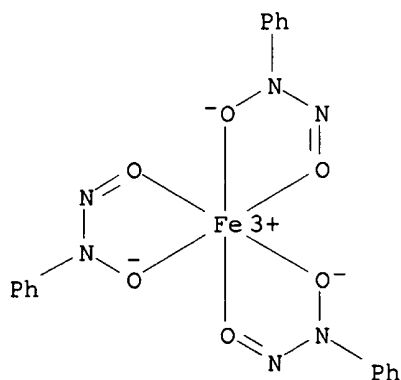
protective film on the metal surface that considerably reduced the corrosion rate of Zn; Cu and benzotriazole formed an amber cryst. chelate insol. in water, mineral acids, and org. solvents; it deposited as a film on the metal surface, protecting it against corrosion at pH 7-8.5; Co and .alpha.-nitroso-.beta.-naphthol in 50% HOAc formed purple crystals insol. in water and sol. in org. solvents; it does not form a film on metal and it accelerates the corrosion of Co. Results obtained by the ionization method for recording x-rays were confirmed by chem. anal.

IT 14319-01-8P

RL: FORM (Formation, nonpreparative); **PREP (Preparation)**
(formation of, in corrosion inhibition of steel)

RN 14319-01-8 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)



L15 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1972:451697 HCAPLUS

DN 77:51697

TI Mechanism of the protective action of complexing reagents studied using radioactive isotopes

AU Ushenina, V. F.; Klyuchnikov, N. G.

CS USSR

SO Uchenye Zapiski, Moskovskii Gosudarstvennyi Pedagogicheskii Institut (1971), No. 340, 270-7

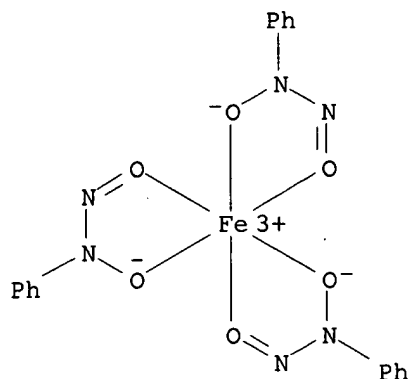
CODEN: UMPLA6; ISSN: 0372-4387

DT Journal

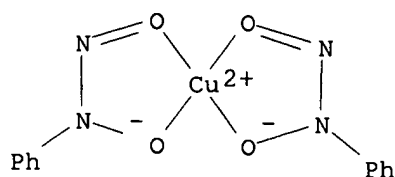
LA Russian

AB Two possible mechanisms of intracomplex phase formation on the surface of metals were suggested previously (1968) during study of the kinetics of metal dissoln. in the presence of complex-forming reagents: intracomplex compds. having good protective properties are formed directly on the metal surface and intercomplex compds. are formed in soln. and then an insol. chelate ppts. on the metal surface with formation of a loose film with poor protective properties. Recent expts. with use of radioisotopes substantiated these 2 mechanisms. The Zn 8-hydroxyquinolinate and 5,7-dibromo-8-hydroxyquinolinate are formed on the surface of the metal, providing films having good protective properties. Fe cupferronate was formed in soln. and then pptd. as the chelate, giving loose films with poor protective properties. Co nitrosonaphthalate also formed in the soln., but the chelate does not ppt. on the surface of the metal. On the contrary, its formation promotes soln. of metal ions in soln., which

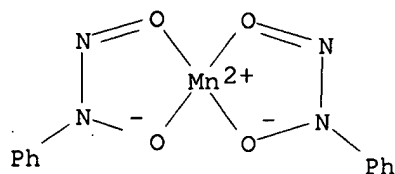
RN 14319-01-8 HCAPLUS
 CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
 (CA INDEX NAME)



L15 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2003 ACS
 AN 1970:410254 HCAPLUS
 DN 73:10254
 TI Thermal and spectral study of some divalent metal chelates of cupferron and dicupferron
 AU Bottei, Rudolph S.; Schneggenburger, R. G.
 CS Dep. of Chem. and the Radiat. Lab., Univ. of Notre Dame, Notre Dame, IN, USA
 SO Journal of Inorganic and Nuclear Chemistry (1970), 32(5), 1525-45
 CODEN: JINCAO; ISSN: 0022-1902
 DT Journal
 LA English
 AB The thermal properties of cupferron and dicupferron chelates with Pb(II), Ni, Cu(II), Mn(II), Co(II), Be, Pd(II), Zn, Hg(II), and Cd have been studied by thermogravimetry. Except for the chelates of Hg and Pd, the cupferronates were less thermally stable than the dicupferronates. The metal dicupferronates decomp. explosively, except the Hg chelate which slowly decomp. leaving very little residue. With a few exceptions, the thermal stability orders of the 2 series of chelates were generally the same. The thermal decompn. products of the dicupferron chelates of Cu(II), Pb(II), Ni, Zn, and Pd(II) were studied mass spectrometrically. Some of the gases observed included: N, CO₂, N₂O, and NO. X-ray powder diffraction and ir spectral data are also reported.
 IT 15613-15-7P 15613-20-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 15613-15-7 HCAPLUS
 CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
 (CA INDEX NAME)



RN 15613-20-4 HCAPLUS

CN Manganese, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]-
(9CI) (CA INDEX NAME)

L15 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2003 ACS

AN 1967:119365 HCAPLUS

DN 66:119365

TI Relation between the composition of a complex and the optimum degree of
acidity for its extraction

AU Budesinsky, Bretislav

CS Ceskoslov. Akad. Ved, Prague, Czech.

SO Collection of Czechoslovak Chemical Communications (1967), 32(5), 1688-97
CODEN: CCCCAK; ISSN: 0010-0765

DT Journal

LA German

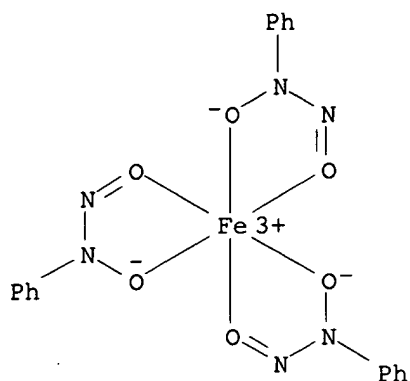
AB Theoretical relations were derived between the optimum pH values for the
extn. of a complex and its compn., the distribution coeff. of
electroneutral particles of the complex-forming reagent, and the
concurrent reactions of the reagent with protons or of the metal cation
with OH-. The validity of the relations derived was verified by extg. 26
metal cations by means of the dithizone, 8-hydroxyquinoline,
acetylacetone, thenoyltrifluoroacetone, and cupferron in the systems
H2O-CHCl3 or H2O-C6H6. The theory is applicable only if the org. solvent
is practically immiscible with water.

IT 14319-01-8P 15613-15-7P 15661-73-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

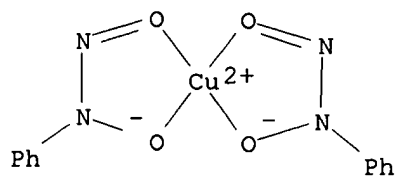
RN 14319-01-8 HCAPLUS

CN Iron, tris[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)



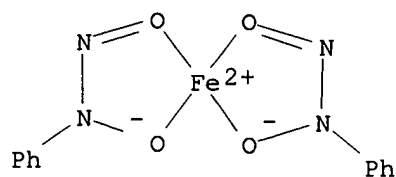
RN 15613-15-7 HCAPLUS

CN Copper, bis[N-(hydroxy-.kappa.O)-N-(nitroso-.kappa.O)benzenaminato]- (9CI)
(CA INDEX NAME)



RN 15661-73-1 HCAPLUS

CN Iron, bis(N-hydroxy-N-nitrosobenzenaminato-O,O')-, (T-4)- (9CI) (CA INDEX NAME)





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3	NPL	2
4	1449	2

Total number of pages: 10

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